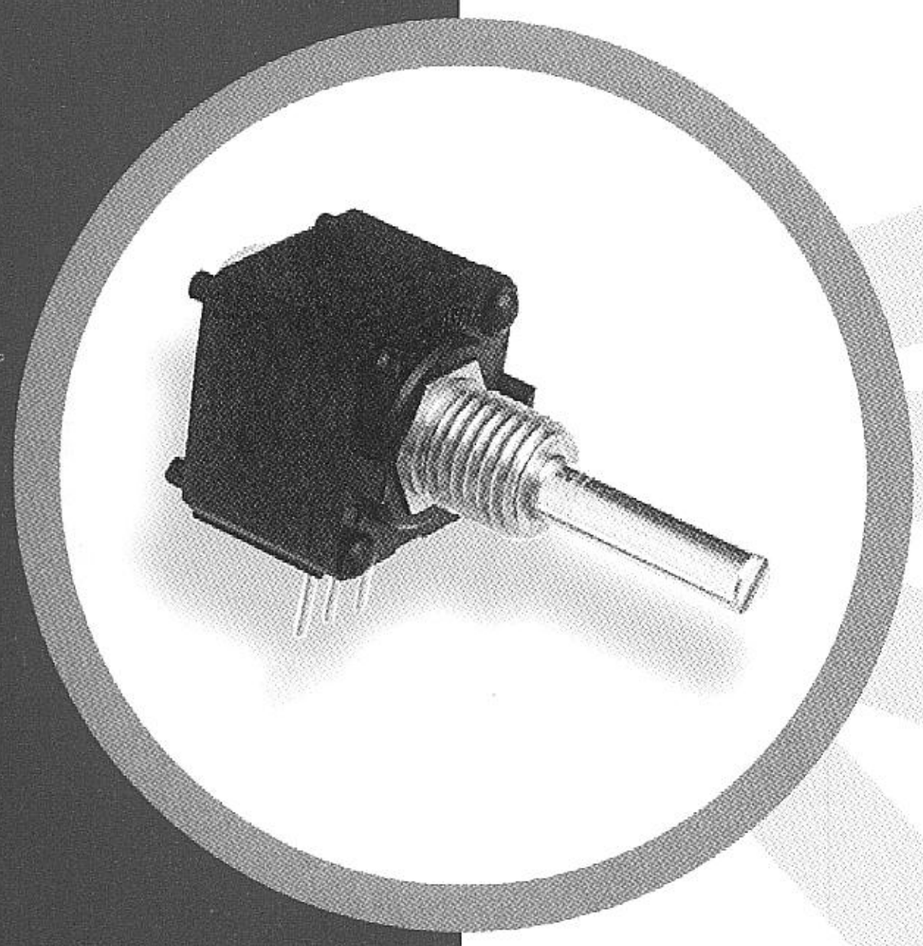
Model 590

NEW

Commercial Potentiometers



FEATURES:

- *Commercial Modular Pot*
- *Conductive Plastic Element*
- *Smooth Feel*
- *High Rotational Life*
- *Quiet Electrical Output*
- *Robust Construction*

Electrical

RESISTANCE RANGE:
Linear- 100Ω to 5.0 megΩ
Non-linear- 500Ω to 2.0 megΩ

RESISTANCE TOLERANCE:
Linear- Standard ±10% to 500K,
±20% over 500K
Non-Linear- Standard ±10% to 100K,
±20% over 100K

TAPER TOLERANCE:
20% of Nominal R @ 50%
Mechanical Rotation

LINEARITY:
±5% Independent

END RESISTANCE:
Linear- 4Ω Max. Each End
Non-Linear- 4Ω Max., low side;
1% Total R high side

POWER RATING:
0.5 watts @ 70°C, Derated Linearly
to 0 watts at 120°C; for Non-Linear
Tapers or PC Mount, Derate by 50%.

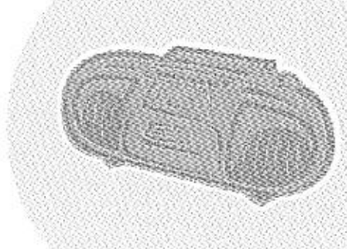
EFFECTIVE ROTATION:
265° ±5° without Rotary Switch
240° ±5° with Rotary Switch

DYNAMIC NOISE:
1.5% of total Rt Standard Linear

MAXIMUM CONTINUOUS WORKING VOLTAGE:
350 VAC across End Terminals,
but within Power Rating.

DIELECTRIC WITHSTANDING VOLTAGE:
Sea Level- 750 VAC
70,000 Feet- 350 VAC

SWITCH SPECIFICATIONS:
Rotary (AL) Switch: S.P.S.T. and
S.P.D.T., 125 mA, 28 VDC (Dry Circuit)
CCW or CW, Rotational Life 25,000
cycles (Rated Load).



Environmental

OPERATING TEMPERATURE:
-40°C to +120°C
STORAGE TEMPERATURE:
-55°C to +120°C

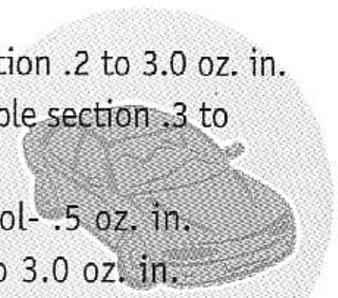
TEMPERATURE CYCLING:
-40°C to +120°C (4 % Δ Rt)

LOAD LIFE:
1000 hrs. Rated Load @ 70°C
(10% Δ Rt)
ROTATIONAL LOAD LIFE:
50,000 cycles
(10% Δ Rt)
TCR (Over Storage Temperature Range):
±1,000 ppm/°C

Mechanical

MECHANICAL ROTATION:
295° ±5°

TORQUE:
Operating-Single section .2 to 3.0 oz. in.
Dual or triple section .3 to
4.5 oz. in.
Variation in a control- .5 oz. in.
Center Detent- .6 to 3.0 oz. in.
Stop Strength- 3 in. lbs. min.

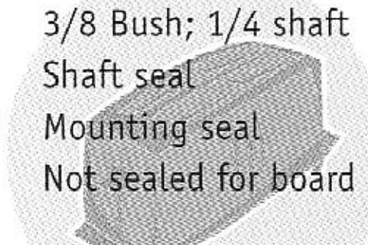


WEIGHT (APPROX):
Single- 0.19 oz., Dual- 0.27 oz.,
Triple- 0.35 oz.

MARKING:
Ink Stamp on Periphery or Rear per
EIA standard

CONSTRUCTION FEATURES:
Up to three sections
Mounting-Bushing
PC Support Plates
Type A forward mounting
Type C rear mounting
Rotary switches
Valley detents
Solder hook terminals
3/8 Bush; 1/4 shaft
Shaft seal
Mounting seal
Not sealed for board washing

CONSTRUCTION MATERIALS:
Housing- Molded Thermoplastic-black
Bushing- Metal
Shaft- Metal
Wiper- Metal contact spring

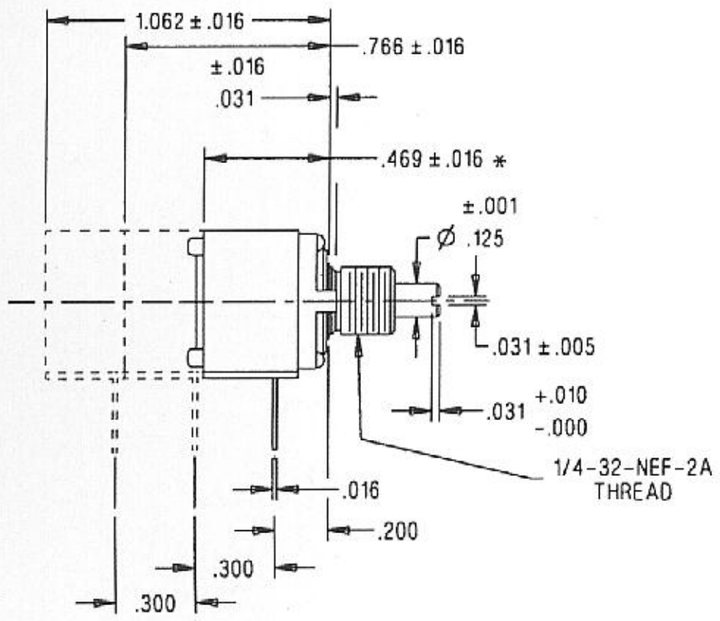


ISO 9001 CERTIFIED

CLAROSTAT

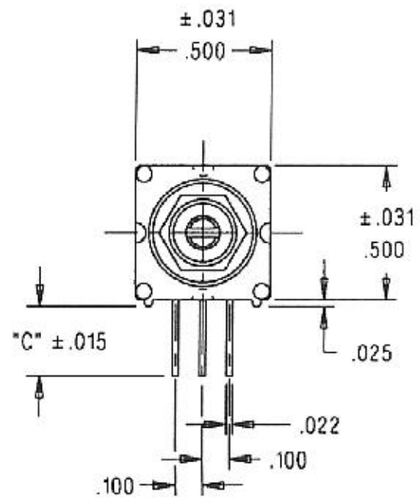
800 872 0042 · Clarostat Sensors and Controls · El Paso, Texas 79936

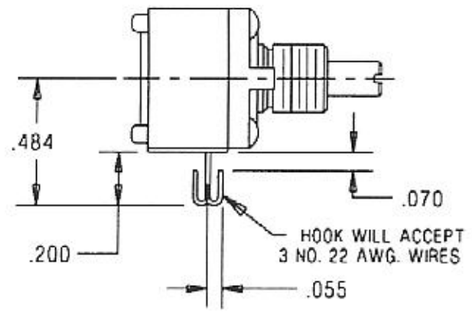
DIMENSIONS



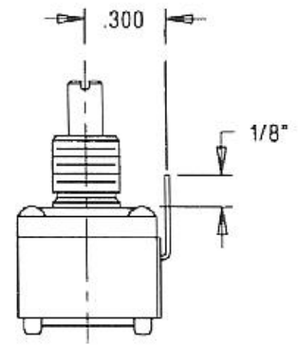
SINGLE, DUAL OR TRIPLE

(SECOND OR THIRD SECTION MAY BE AL SERIES ROTARY SWITCH)
PRINTED CIRCUIT TYPE B-22A
"C" TERMINAL LENGTH: .850 MAX.
STANDARD P.C. TERMINAL LENGTH: .250
* DIMENSION INCREASES TO .583 WITH CENTER DETENT

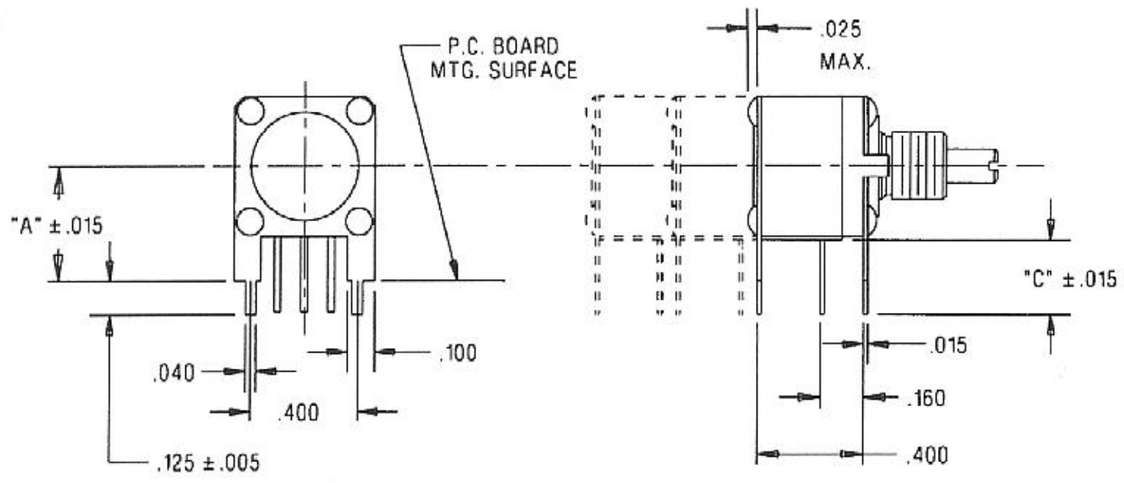




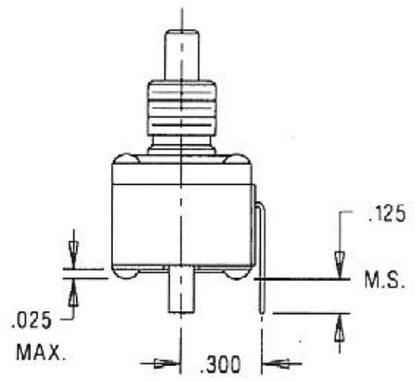
SOLDER LUG TERMINALS



TYPE "A" MOUNTING



- P.C. TYPE B-24 - SINGLE, DUAL OR TRIPLE -
PANEL AND REAR SUPPORT PLATES - HORIZONTAL MOUNTING



TYPE "C" MOUNTING

ORDERING INFORMATION

When ordering, indicate the desired options as shown in this example:

590 S X 1 M 16 S 103 S P

SERIES
590 CP

NUMBER OF SECTIONS
S: Single
D: Dual
T: Triple

MECHANICAL CONFIGURATION
X: None (single shaft S, D, T sections)
S: Single w/ rotary switch
P: Dual w/ rotary switch
D: Single w/ center detent (1/4 Dia Bush)
E: Dual w/ center detent (1/4 Dia Bush)

LOCATING PIN
7: None
1: SGL, 9 o'clock
2: SGL, 3 o'clock
5: DBL, 3 & 9 o'clock

METRIC BUSHING SIZE & SHAFT DIAMETER
M: M7 x .75; 6mm L Shaft, 3mm Dia.

ENGLISH BUSHING SIZE & SHAFT DIAMETER
N: 1/4 Dia x 1/4 L Shaft, 1/8 Dia
J: 1/4 Dia x 3/8 L Shaft, 1/8 Dia
G: 3/8 Dia x 3/8 L Shaft, 1/4 Dia

MATCHING METRIC
Shaft length code, mm
Single Shaft
10: 10mm
13: 13mm
16: 16mm
22: 22mm
25: 25mm

MATCHING ENGLISH
Shaft length code, in 64th in.
Single Shaft
32: 1/2 in.
40: 5/8 in.
48: 3/4 in.
56: 7/8 in.
64: 1 in.
80: 1 1/4 in.

SHAFT STYLE
S: Slotted
F: Flatted
P: Plain

RESISTANCE CODE (ohms)
(EIA Code- First 2 significant digits, 3rd is number of zeros)

100	10K	500K
250	20K	750K
500	25K	1meg
750	50K	2meg
1K	75K	5meg
2.5K	100K	
5K	250K	

TAPER
S: Linear, ±10%
Z: CW Log, ±10% to 500K ohms; ±20% over 500K
R: CCW Log, ±10% to 500K ohms; ±20% over 500K

TERMINAL CONFIGURATION
P: PC, 0.250" long
B: P terminals w/B-24-5 support plate
S: Solder Hook
A: Type A Mounting
C: Type C Mounting

To order or for custom applications, call 800-872-0042

800 872 0042 · Clarostat Sensors and Controls · El Paso, Texas 79936

CLAROSTAT